

# SUGAR and PLANTATION NEWS

## GRINDING IS NOW WELL UNDER WAY ON ALL ISLANDS

Mills On Hawaii, Delayed By Weather, Get Started During January

## FAVORABLE WEATHER AIDS HARVEST OF HEAVY CROP

Quality of Juices Reported As Satisfactory By Most Plantations

Grinding is now in full swing on all the islands and practically every one of the forty-five Hawaiian sugar mills are operating.

The last two weeks of January saw every one of the dozen or more large mills that had been delayed in starting, mainly on Hawaii, get under way, and this month should see the harvesting reach its full volume.

The most satisfactory feature of the season is the favorable attendant circumstances that have accompanied a good start in the grinding. As reported last week, the quality of the juices is generally found to be good, and numerous reports have been made of much better juice this year than last.

Weather Now Favorable

The last two weeks brought favorable weather, and Hawaii mills that were late in starting swung into line one after another. With the favorable weather for this season of the year, the harvesting is proceeding very well.

The additional fact that transportation facilities and the means of marketing will give no cause for worry this year is additional satisfaction to sugar men.

Matson steamers and freighters handled the early shipments with ease, and the first American-Hawaiian steamer, the Minnesota, will get away with a full cargo to San Francisco about the middle of this month.

Shipments for Week

During the last seven days more than 15,500 tons of sugar was shipped out to San Francisco and the East, and with practically all mills now grinding the shipments are expected to mount up rapidly during the next few weeks.

Shipments during the week were: Wilhelmina, sailed January 24, 4,778 tons for Crockett; Hyades, sailed January 27, 5,000 tons for transshipment overland, 4,000 tons for Crockett; Manoa, sailed January 30, 1,301 tons for the East and 5,115 for Crockett.

The late start on Hawaii was caused by a period of bad weather. Most of the mills on this island started grinding in middle and late January, with a few getting under way late in December.

Big Island Mills Started

December starts were made on Hawaii by Laupahoehoe, Hamakua, Union Mill, Havi Mill, Puna, Kona and Kohala. Early in January, Oahu, Molokai and Pacific Sugar Mill, Hawaii and Huleihoni got under way. During the last twenty days of the month mills started grinding on Waikiki, Hilo, Hawaii Mill, Onomea, Pepeekeo, Honouliuli, Kailua, Kapaemahu, Paauhau and Hawaiian Agricultural. Nihi Mill is the only one yet to start, and the expectation is that it will be under way within a week.

Maui and Kauai mills were away to an early start, most of the seven mills on Maui having been grinding since early in December. Mills on Kauai were among the first to begin grinding, Waimea beginning October 19 and Kealahou on November 13. The balance were started before December 20.

Five mills on Oahu were started during December. Waianae will be late and Waialae is expected to be started this week.

## BEET PULP DRIERS MAY BE USED FOR POTATOES

The Michigan Public Domain Commission has reported to the legislature of that State on the feasibility of using the pulp-driers in the large sugar- and chicory factories to dry the surplus potato crop.

The report of the commission goes quite fully into the commercial possibilities of dried potatoes and potato flour in the home and foreign markets.

In all European countries potato flour is now largely used with the cereals for bread making and this use will undoubtedly continue after the war. Dried potatoes are also prepared on an enormous scale and used for cattle feed, the apparatus being essentially the same as that used for drying pulp in the beet factories.

## Hawaiian Soil Peculiar

In the annual report of the Hawaii Experiment Station for 1915, recently issued, former Chemist W. T. McGeorge calls attention to the invariable presence of colloidal aluminum hydroxide in Hawaiian soils of high aluminum content. In other words in all true clay soils a "gel" is always present.

In all soils which contain iron in excess of alumina, this colloidal gel is never formed," he stated.

## Possibilities of Philippine Sugar Attract Attention

Keen interest is developing on the mainland in the possibilities of investment in the sugar industry in the Philippine Islands according to accounts in trade journals and daily papers. Henry Parker Willis, secretary of the Federal Reserve Board, who recently returned to Washington after six months in the Philippines is largely responsible for the increased interest.

Willis is endeavoring to arouse American capital to the opportunity for investment in the Philippine sugar industry. In published articles he referred to the Philippines as "the largest undeveloped cane sugar country in the world" and reported that European capitalists were about to undertake investment and development on a large scale when the war intervened.

Planters of the islands are seeking definite proposals from investors and recently twenty-two planters from Sulu and Saravia convened and discussed the construction of centrals in Negros. Tentative contracts were considered and the contract of the San Carlos Milling Company, owned by Hawaiian capital, was held up as an example and reported as most satisfactory to both planters and company. It is reported that undoubtedly a sugar central will be established in the Negros district.

## GERMANY ATTEMPTS TO INCREASE SUGAR CROP

Growers and Refiners Fail To Get Price Raises Asked

BERLIN, January 1.—The Federal Council has adopted measures designed to increase the sugar crop of 1917. It has fixed the price of sugar beets at two marks per hundredweight (of 110 pounds), has ordered that the growers shall receive back from the factories a larger percentage of sliced beets after the sugar has been extracted, has assigned them a larger proportion of the available supply of commercial fertilizers, and has taken measures to increase their labor supply, especially of producers of war.

The growers did not get as big an advance in beet prices as they asked for. Instead of getting the present price of 1.50 marks doubled, they get an increase of only fifty pfennigs. The raw sugar factories also get only a small part of the advance that they expected. They wanted the present price of fifteen marks raised to twenty-five marks, but the Council conceded only eighteen marks. This compares with a price of nine marks for the first year of the war. The advances are, it is believed, quite ample for securing a considerable increase in the best average next year.

Similar advances are reported from New York by Willett & Gray under date of January 18 as follows:

"The request of the beet growers in Germany to have the price of beetroots advanced to three marks per fifty kilos was not fully realized, as the official price was fixed at two marks per fifty kilos, or say \$9.50 per ton. The raw sugar price is fixed at eighteen marks per fifty kilos (3.50 cents per pound), instead of twenty-five marks asked.

Advices state that these lower prices are not entirely satisfactory to the beet growers and that no material increase in sowings can be expected."

## LEGUME TESTS FOR NITROGEN REPORTED

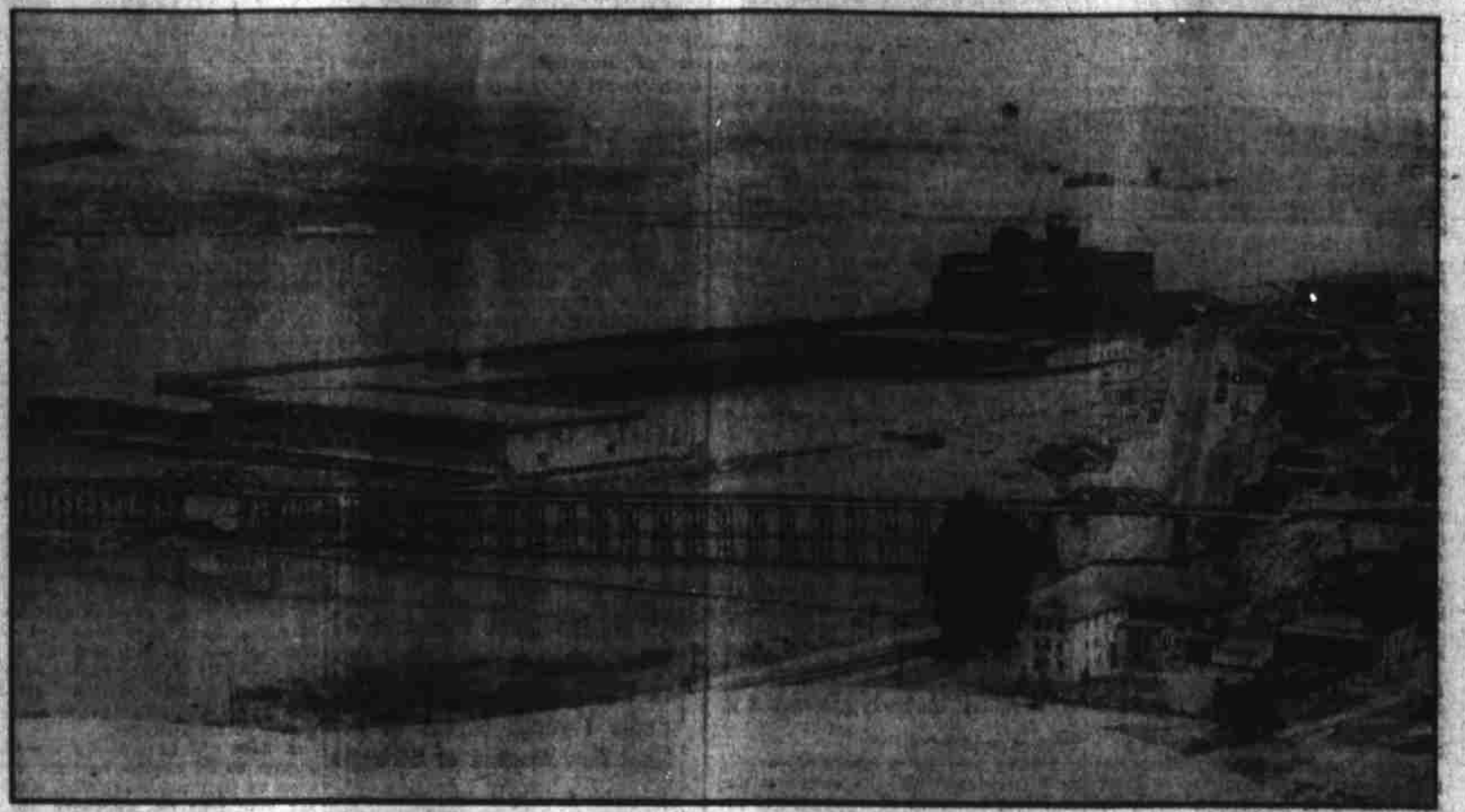
Planters' Station Trials Made For Green Manure

W. T. McGeorge, formerly chemist of the planters' experiment station at the Hawaii Experiment Station for 1915, recently issued, former Chemist W. T. McGeorge calls attention to the invariable presence of colloidal aluminum hydroxide in Hawaiian soils of high aluminum content. In other words in all true clay soils a "gel" is always present.

In all instances the content of nitrogen in the soil from which the legumes had been removed was much lower than in the check soil, but these soils low in nitrates on standing in the open air soon equalled in nitrate value the soil of the check pots.

Where much legume material was turned under the nitrates in the soils were greatly increased. The plants grown in soils deficient in lime made a poor growth and had a lower nitrogen content, calculated on a water-free basis, than the plants grown in soils rich in lime. In a second experiment lime was added to the lime-poor soil, but the plants grown in this soil were also undernourished and low in nitrogen."

LATEST photograph of the California and Hawaiian Sugar Refining Company plant at Crockett, California, showing part of the town, on the shore of San Francisco Bay. In the left foreground is the latest new warehouse. Between this warehouse and the refinery shown in the right background considerable improvement work has been done for another warehouse. The Sugar Factors Company recently voted to go ahead with a two year program of new construction for the plant at a cost of \$2,500,000.



## PILIKIA IN PATH OF CUBAN CROP

Sugar Movement Hampered, Lack of Rain Felt and Sucrose in Cane Is Poor

Reporting prospects for a continued firm market for raws and difficulties encountered by Cuban planters, the New York correspondent of a local sugar house gives the following interesting review of the market situation under date of January 12:

This market continues to be governed by the same conditions as outlined in our last report. The trade is pursuing a hand to mouth policy based on the hope and expectation that supplies from Cuba will shortly be quite abundant, and that prices, as customary in February, will ease off.

For the moment, however, reduced crop from three to four days behind with their deliveries and are compelled from day to day to anticipate their requirements with the result that firmness in prices of raws is quite noticeable.

Conditions Not Discouraging

Bearing in mind that these prices are almost one cent per pound over last year's quotations at this time and that the export demand still remains quietest, one is tempted to wonder what the result would be if even a very moderate export business should materialize.

Sales to refiners this week have been firm on prompt Cajas at 4 1/2 cents for early February 4 1/2 cents, and for all February 4 1/2 cents, and for Porto Rico are selling well up to the Cuban price, viz: 5 1/2 cents for immediate loading and 5 1/2 cents c. i. f. for late January arrival.

On the whole the conditions are not discouraging.

Cuban Railroads Demoralized

The question of peace or war does not seem to have much more than a reflex influence on sugar.

Today there have been sales to refiners of Cajas for January clearance (about 30,000 bags) at 4 1/2 cents, c. i. f. and 5,000 bags Porto Rico early February loading at 5 1/2 cents. Operators are said to be interested in Cajas for first half February shipment at 4 1/2 cents and for all February shipment at 4 1/2 cents.

Demoralization on the Cuban railroads continues and is hampering very seriously the movement of sugars to the ports.

Sucrose Poor, Drought Felt

Latest reports state that 144 centrals are now operating in Cuba against 151 last year.

Sucrose in the Cuban cane is still reported much behind last year, and some have gone so far as to say that the cane is complaining that their cane is drying up owing to the fact that the long drought of last spring followed by tardy and insufficient rains gave the cane but poor assistance in reviving from the drought.

It is stated in quarters usually well informed that the number of stalks to the hill will this year fall far short of last year and also that many of the late appearing stalks will not have stamina enough to mature even if left to grow.

Refined sugar is coming into consumption quite rapidly considering and refiners are meeting with much difficulty for want of raws, in keeping melting up to the requirements.

The Federal starts up again in a few days and will help to relieve the situation, but their start also involves a greater supply of raws.

Beet sugar interests have definitely

## Comparative Tests Show That Creosoted Lumber Is Weaker

Creosoting Douglas fir, or "North West," as it is usually termed in Hawaii, decreases its strength about one-sixth. This fact is reported by H. B. McFarland in a recent bulletin of the American Railway Engineering Association.

Tests were made at sixty-one representative Douglas fir stringers in which the stringers were subjected to a process of creosoting involving boiling in vacuum. Nine of the specimens were put to special tests after treatment, while fifty-two stringers were cut in two and comparative tests made of the untreated and treated halves.

Comparison of Tests

"A comparison of results of the transverse tests," says the bulletin, "applying loads at the third points of 7x10x14 foot span treated and untreated stringers shows that of the fifty-two representative untreated specimens sixteen failed by shear, three by tension and shear, two by crushing and shear, one by crushing, while the following numbers of creosoted stringers failed from the causes noted, thirty-two shear, fourteen tension, four tension and shear, and two crushing and shear."

"The average elastic limit of the untreated pieces was 4,269 pounds per square inch as compared to 3,481 pounds per square inch for the treated stringers."

Specimens for the compression tests, applying the load parallel to the grain, were 5x8x12 inches in size. It was found that the maximum load for the untreated pieces was 4114 pounds per square inch and 2869 pounds for the treated blocks.

Applying the load perpendicularly to the grain of 6x6x30 inch blocks showed that the treated blocks had an average elastic limit of 325 pounds per square inch, which was 116 pounds per square inch less than the average for those that were not treated.

## ANNUAL MEETINGS CALLED

Hackfeld & Co. announced yesterday the dates of a number of annual meetings of stockholders of its companies. They are Oahu Sugar Company, February 6 at two o'clock; Waialeale Water Company, same afternoon at half-past two; Kekaha Sugar Company, February 21 at ten o'clock; Waimea Sugar Mill Company, same morning at eleven o'clock; February 27: Koloa Sugar Company, ten o'clock in the morning; Puna Agricultural Company, half-past nine; February 28: Kipahulu, half-past nine; Lihue, ten; Waialeale Electric Company, half-past ten; Makae Sugar Company, two; Kapaia Land Company, half-past two; Oloheua Land Company, half-past three.

## Brewer Mills Grinding

Waialeale is the only one of the Brewer & Co. plantations that had not started grinding by the end of the month and reports are expected that the mill got under way during the week. Olowalu started grinding last Friday and Paauhau started January 13 while Hawaii Mill was under way on the eighteenth. Hawaiian Agricultural started yesterday. Pepeekeo started Wednesday.

Withdrawn from the Eastern markets and also from the Southern States so that Eastern and Southern refiners will have to meet the demand from these markets which was not the case last year.

The following conclusions were drawn, "moisture may be successfully removed by boiling under vacuum. Moisture determinations show that on an average, thirty-five per cent of the total moisture was removed by the process. The removal of moisture by boiling under vacuum, preliminary to creosoting, decreases the physical strength of the material. The weight of creosote per unit or volume for treated material is dependent on the structure of the specimen. Spring wood offers greater resistance to treatment than summer wood."

Heat-Resistant

"Special tests of treated stringers indicate that the decrease in physical strength due to the treatment is not confined to the area penetrated by creosote. The entire structure is affected. The compressive strength parallel to the grain was decreased six per cent. The compressive strength perpendicular to the grain was decreased twenty-six per cent."

"Although the average strength of the treated material is appreciably decreased, its stiffness as measured by the modulus of elasticity is not affected. In general, the average strength of Douglas fir bridge stringers, subjected to the boiling-under-vacuum process of creosoting was five-sixths of its original strength."

A Timely Report

The use of creosoted lumber is yearly increasing on the plantations for its substitution for green lumber in a supposed situation, is a business proposition.

The rapidity with which untreated lumber rots when exposed to the weather is an item of considerable importance, considering the amount of capital that must be charged against crop, or added to profit and loss from this source. Information such as is given in this bulletin is timely as it gives plantation men exact calculations on which to decide whether to use creosoted or untreated lumber.

## New Chemical Methods

M. O. Johnson, chemist of the Hawaii Experiment Station, has published in the Journal of the American Chemical Society, a method for the determination of very small quantities of prussic acid in plants. This method was evolved in connection with some chemical work with cassava varieties.

## Danish Indies Crop

Commenting on the purchase by the United States of the Danish West Indies islands of St. Croix, St. Thomas and St. John, Willett & Gray state that the latter two islands being small produce only enough sugar for their own consumption. Latest estimate of the recent crop on St. Croix is 12,000 tons against a 1916 crop of 11,750 tons.

## Sugar Tariff Unlikely

Reporting under date of January 18, Willett & Gray state that advice indicates that no increased sugar duties will be proposed by the way and means committee considering the increased revenue legislation. Other forms of raising revenue will be suggested by the committee it is believed.

## A FORTY YEARS' TEST

Chamberlain's Cough Remedy has been curing coughs and colds for the past forty years and has gained in popularity every year. What better recommendation is required? For sale by all dealers, Henson, Smith & Co., agents for Hawaii.

## MARKET IS FIRM ON SMALL SUPPLY

Cuban Crop Progresses With Favorable Weather and Futures Ease Off

Sales of raw sugar at New York for the week ending January 18, were 169,000 bags Cuban, about prompt, and early delivery; 2700 tons Cuban prompt shipment and 42,000 bags Porto Rico late January and early February.

During the greater part of the week, the market for nearby positions, owing to light arrivals of raws to refiners, was firmly maintained at 5.30c, according to Willett & Gray's report. Toward the close, however, this position eased off and it was impossible to sell about sugars at better than 5.27 cents; and market quotations were reduced to this basis.

Hawaiian basis quotations for the same period held for two days at 5.30 cents, advanced to 5.39 cents, dropped to 5.27 cents and declined the last two days to 5.305 cents.

Cuban Weather Favorable

Stocks in the United States and Cuba together were 171,575 tons, against 137,534 tons last week and 191,852 tons last year, a decrease of 20,277 tons from last year. Estimated amounts from Cuba and Porto Rico were 35,000 tons, Hawaii, 20,000 tons; various 15,000 tons total, 70,000 tons against 81,000 tons last year.

Cuban centrals grinding were 145 against 132 last week and 161 last year. The favorable weather conditions allowed the Cuban crop to make excellent progress; and with the rapid increase in the number of centrals the market for future shipments ruled easier. February and March were offered freely at lower figures.

Sale for Russia Made

Sales were reported of about 25,000 tons of March-April raws at 5.02 cents to several refiners which is to be exchanged for a similar quantity of refined sugar for export. Russia was mentioned as the destination of this sugar.

Porto Rico sold for January positions at 5.27 cents, but later declined to 5.14 cents. Full duty sugars were obtainable at 4 1/2 cents c. i. f. the parity of 4 1/2 cents c. & f. for Cubas or 5.39 cents.

Receipts at Atlantic ports, 41,018 tons, were larger than the meltings, but only 16,980 tons arrived at New York, the balance going to Boston and Philadelphia. Total receipts included 12,000 tons low-grade Philippines. Meltings were increased to 28,000 tons and total stocks to 63,052 tons.

Cuban deliveries delayed

Cuban receipts for the week were 57,122 tons, against 94,523 tons last year. New crop exports were 729 tons to New Orleans, 29,169 tons to Atlantic ports and 3357 tons old crop to Atlantic ports a total of 29,526 tons for the week. Last year this week the total was 42,338 tons. Stocks in the island were 89,143 tons, 80,642 tons new crop and 8500 tons old sugars. Visible production to January 13 was 129,025 against 247,199 tons last year.

Refined remained unchanged during the week, basis 6.75 cents, a quotation that has prevailed since the opening of the month. Refiners are still behind in their deliveries owing partly to inclement weather as well to shortage of supplies.

## HALF BILLION IS VALUE OF YEAR'S SUGAR BUSINESS

United States Exports During 1916 Reach Hundred Million Dollars

DOMESTIC PRODUCTION IS FIXED AT \$125,000,000

Curtailement of European Beet Supplies Makes America World's Sugar Center

Nearly a half a billion dollars worth of sugar passed through the ports of continental United States in 1916.

About \$250,000,000 of this was raw sugar from foreign countries, chiefly Cuba; \$125,000,000 worth of raw sugar from our own islands, and \$100,000,000 worth of refined sugar sent out of the United States, chiefly to Europe.

A compilation by the Foreign Trade Department of the National City Bank of New York shows that the value of sugar exported from the United States in the calendar year 1916 was in round terms \$100,000,000 against \$43,000,000 worth in 1915, \$18,000,000 in 1914 and less than \$2,000,000 in 1913, the year immediately preceding the war.

United States Supplies World

Indeed the United States had never been an exporter of sugar in any considerable quantity until the exigencies of the war rendered inaccessible the sugar producing area from which Western Europe had been accustomed to draw its supplies.

Germany, Austria-Hungary and Russia, as the world's great producers of beet sugar, had met all the sugar requirements of the remainder of Europe, but when their supplies became no longer available by reason of war conditions, and those of France and Belgium were greatly reduced, the remainder of Europe necessarily turned to the cane sugar section of the world for its supply.

Europe Depends On America

Cuba, Java, the Hawaiian Islands, Porto Rico and the Philippines are the world's largest producers of cane sugar for exportation. India is a large producer, but has none for exportation.

As Java distributes most of its output to adjacent Asiatic countries, and Cuba, Porto Rico and Hawaii send practically all of their sugar direct to the United States, the American market became the chief source from which Europe could draw sugar.

Exports Increase Enormously

With the cane producing islands of the world exporting most of their product in the raw state and America the refining center of the trade under war conditions, the quantity of sugar exported from the United States increased enormously.

Exports jumped from 20,000 tons of refined sugar in 1913, to 185,000 tons in 1914; to 481,500 tons in 1915 and to approximately 875,000 tons in 1916. Meanwhile the price paid for the total value of the refined sugar exported from the United States up to \$100,000,000.

According to the National City Bank of New York, compilations show that the quantity of sugar entering continental United States during 1916 was: From Cuba, about 2,500,000 tons; from the Hawaiian Islands, about 625,000 tons; from Porto Rico, nearly 500,000 tons; from the Philippines, about 125,000 tons; while on mainland fields there was produced about 875,000 tons of beet sugar and more than 250,000 tons of cane sugar.

Domestic Use Decreases

Thus the total quantity of sugar handled in the United States, including the product of our own fields, that of our own islands, and that brought from foreign countries, was about \$475,000,000, of which about \$75,000,000 was exported, leaving the amount retained for consumption about \$400,000,000, against an average of about \$425,000,000 in the year immediately preceding the war.

This slight reduction in domestic consumption is attributed to the advance in prices, materially higher than that which was considered normal prior to the war.

This would bring the consumption in the United States for 1916 down to an average of eighty pounds per capita, as against eighty-six pounds per capita in 1915 and eighty-nine pounds in 1914, the high record year in per capita consumption.

The average per capita consumption of sugar in the United States has steadily grown from thirty-three pounds per capita in 1870 to thirty-nine pounds in 1880; fifty-one pounds in 1900, eighty pounds in 1910, eighty-nine pounds in 1915, dropping with the advance in prices to eighty-six pounds per capita in 1916, and about eighty pounds in 1917.

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